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MONTANA COMMERCIAL FERTILIZER REPORT

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Leo A. Giacometto, Director

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MONTANA DEPARTMENT OF AGRICULTURE
PLANT INDUSTRY DIVISION
1993

Field Inspectors

Warren Anderson
Department of Agriculture
P.O. Box 1397
Great Falls, Montana 59403
Phone: (406) 452-9561
Fax: (406) 761-2141

Robyn Cassel
Department of Agriculture
P.O. Box 495
Saco, Montana 59261
Phone: (406) 527-3366

Donald Simmons
Department of Agriculture
607 S.W. Higgins
Missoula, Montana 59801
Phone: (406) 549-9678
Fax: (406) 549-7238

Andy Drange
Department of Agriculture
321 South 24th Street West
Billings, Montana 59102
Phone: (406) 652-3615
Fax: (406) 652-3617

Thomas Lawrence
P.O. Box 334
Bigfork, Montana 59911
Phone: (406) 837-4545

Daniel Poff
P.O. Box 95
Thompson Falls, MT 59873
Phone: (406) 827-3728

Velda Baltrusch
278 Highway 16
Glendive, MT 59330
Phone: (406) 365-6306

Helena Office Address

Department of Agriculture
P.O. Box 200201
Helena, Montana 59620-0201
Phone: (406) 444-3730
Fax: (406) 444-5409

Helena Personnel

Will Kissinger, Administrator
Bruce W. Meyer, Bureau Chief
David Taylor, Bureau Chief
Ed Greenwood, Warehouse Examiner
Carol Kimble, Adm. Assistant
Sandy Copenhaver, Secretary
Michelle Wheat, Secretary

Feed & Fertilizer Lab Address

Agricultural Services Bureau
McCall Hall
Montana State University
Bozeman, Montana 59717-0362
Phone: (406) 994-3383
Fax: (406) 994-4494

F&F Lab Personnel

Laszlo Torma, Lab Bureau Chief
Bill Wheeler, Lab Technician

This report consists of the following sections:

Fertilizer Analyses. . . Pages 1 - 19

Statistical. . . . . Pages 20 - 24

Abbreviations Used:

Phosphate Denotes P_2O_5 . . . . .Available Phosphoric Acid

Potash Denotes K_2O . . . . . Soluble Potash

ppm . . . . . Parts Per Million

* . . . . . .Deficiency

MANUFACTURER

AG WEST DIVISION
580 WEST 13TH SOUTH
SALT LAKE CITY,UT 84115

MOUNTAIN GREEN LAWN FOOD LOT #P232991 — SAMPLED IN BILLINGS — SAMPLE # 4267

ANALYSIS	CLAIMED	FOUND	
NITROGEN	25.0%	24.2%	
PHOSPHORUS	5.0%	5.1%	
POTASH	5.0%	5.2%	
IRON	.1%	.08%	

MANUFACTURER

AG WISE INC
P.O.BOX 109
KREMLIN,MT 59601

LIQUID FERTILIZER — SAMPLED IN KREMLIN — SAMPLE # 4967

ANALYSIS	CLAIMED	FOUND	
NITROGEN	20%	19%	*
PHOSPHORUS	10%	9.6%	

MANUFACTURER

AGRI BASICS CO
P.O.BOX 112
BELGRADE,MT 59714

POTASH — SAMPLED IN BIG TIMBER — SAMPLE # 4894

ANALYSIS	CLAIMED	FOUND
POTASH	60%	60.0%

MANUFACTURER

AGRI BASICS CO
1420 MINNESOTA AVE
BILLINGS,MT 59101

AGRIBASICS LAWN & GARDEN FERTILIZER 28-14-0 — SAMPLED IN BILLINGS — SAMPLE # 4854

ANALYSIS	CLAIMED	FOUND	
NITROGEN	28.0%	29.8%	
PHOSPHORUS	14.0%	12.8%	*

CUSTOM BLEND — SAMPLED IN BILLINGS — SAMPLE # 4862

ANALYSIS	CLAIMED	FOUND
NITROGEN	30.0%	30.5%
PHOSPHORUS	10.0%	11.1%

AGRI BASICS CO - BILLINGS CONTINUED

CUSTOM BLEND — SAMPLED IN BILLINGS — SAMPLE # 3740

ANALYSIS	CLAIMED	FOUND	
NITROGEN	16%	15.6%	
PHOSPHORUS	20%	26.9%	
SULFUR	14%	12.9%	*

CUSTOM BLEND — SAMPLED IN BILLINGS — SAMPLE # 4862

ANALYSIS	CLAIMED	FOUND
NITROGEN	30%	30.5%
PHOSPHORUS	10%	11.1%

MANUFACTURER

AGRI BASICS CO
P.O.BOX 1431
GREAT FALLS,MT 59403

CUSTOM BLEND — SAMPLED IN GREAT FALLS — SAMPLE # 4978

ANALYSIS	CLAIMED	FOUND
NITROGEN	8%	8.7%
PHOSPHORUS	41%	41.1%
POTASH	12%	13.7%

MANUFACTURER

AGRI BASICS CO
606 RAILROAD ST
HARDIN,MT 59034

CUSTOM BLEND — SAMPLED IN HARDIN — SAMPLE # 3736

ANALYSIS	CLAIMED	FOUND
NITROGEN	32.1%	31.3%
PHOSPHORUS	16.9%	17.7%
POTASH	3.5%	3.5%
SULFUR	0.9%	2.2%

MANUFACTURER

AGRI BASICS CO

RYEGATE,MT 59074

CUSTOM BLEND — SAMPLED IN RYEGATE — SAMPLE # 3739

ANALYSIS	CLAIMED	FOUND
NITROGEN	12%	12.1%
PHOSPHORUS	15%	15.9%
POTASH	15%	16.4%
SULFUR	10.5%	11.0%

MANUFACTURER

AGRI BASICS CO
903 EAST MAIN
SIDNEY,MT 59270

CUSTOM BLEND — SAMPLED IN SIDNEY — SAMPLE # 5187

ANALYSIS	CLAIMED	FOUND
NITROGEN	25%	25.1%
PHOSPHORUS	25%	25.1%
POTASH	5%	4.8%
SULFUR	5%	4.9%

MANUFACTURER

AGRICULTURAL MINERALS CORP
P.O.BOX 35507
TULSA,OK 74153

UAN 32 — SAMPLED IN BELGRADE — SAMPLE # 5238

ANALYSIS	CLAIMED	FOUND
NITROGEN	32%	32.0%

MANUFACTURER

CASCADE FERTILIZER LTD
P.O.BOX 40
STANDARD,ALBT T0J 3G0
CANADA

28-0-0 — SAMPLED IN GREAT FALLS — SAMPLE # 4964

ANALYSIS	CLAIMED	FOUND	
NITROGEN	28.0%	26.7%	*

MANUFACTURER

CENEX LTD

SAVAGE,MT 59262

CUSTOM BLEND — SAMPLED IN SAVAGE — SAMPLE # 5193

ANALYSIS	CLAIMED	FOUND
NITROGEN	31%	31.4%
PHOSPHORUS	10%	10.4%
POTASH	11%	11.2%

MANUFACTURER

CENEX SUPPLY
P.O.BOX 1440
MILES CITY,MT 59301

CUSTOM BLEND — SAMPLED IN MILES CITY — SAMPLE # 5189

ANALYSIS	CLAIMED	FOUND
NITROGEN	16%	16.8%
PHOSPHORUS	24%	24.7%
POTASH	8%	7.6%
SULFUR	8%	9.6%

MANUFACTURER

CENEX/ LAND O'LAKES AGRONOMY
P.O.BOX 64089
ST. PAUL,MN 55164

11-52-0 — SAMPLED IN CONRAD — SAMPLE # 4583

ANALYSIS	CLAIMED	FOUND
NITROGEN	11.0%	11.1%
PHOSPHORUS	52.0%	52.6%

18-46-0 — SAMPLED IN CONRAD — SAMPLE # 4584

ANALYSIS	CLAIMED	FOUND
NITROGEN	18.0%	17.9%
PHOSPHORUS	46.0%	48.0%

18-46-0 — SAMPLED IN WOLF POINT — SAMPLE # 4639

ANALYSIS	CLAIMED	FOUND
NITROGEN	18.0%	18.0%
PHOSPHORUS	46.0%	47.0%

18-46-0 — SAMPLED IN CHINOOK — SAMPLE # 4650

ANALYSIS	CLAIMED	FOUND
NITROGEN	18.0%	18.1%
PHOSPHORUS	46.0%	46.5%

18-46-0 — SAMPLED IN CIRCLE — SAMPLE # 5177

ANALYSIS	CLAIMED	FOUND
NITROGEN	18.0%	18.0%
PHOSPHORUS	46.0%	46.8%

21-0-0-24 — SAMPLED IN CHINOOK — SAMPLE # 4649

ANALYSIS	CLAIMED	FOUND
NITROGEN	21.0%	21.0%
SULFUR	24.0%	24.8%

46-0-0 — SAMPLED IN WOLF POINT — SAMPLE # 4640

ANALYSIS	CLAIMED	FOUND
NITROGEN	46.0%	46.2%

AMMONIUM SULFATE — SAMPLED IN CUT BANK — SAMPLE # 4589

ANALYSIS	CLAIMED	FOUND
NITROGEN	21.0%	21.0%
SULFUR	24.0%	24.9%

CFI DIAMMONIUM PHOSPHATE — SAMPLED IN BELGRADE — SAMPLE # 5237

ANALYSIS	CLAIMED	FOUND
NITROGEN	18%	18.2%
PHOSPHORUS	46%	46.6%

CFI MONOAMMONIUM PHOSPHATE — SAMPLED IN GREAT FALLS — SAMPLE # 4977

ANALYSIS	CLAIMED	FOUND
NITROGEN	11%	11.3%
PHOSPHORUS	52%	53.1%

CFI MONOAMMONIUM PHOSPHATE — SAMPLED IN BELGRADE — SAMPLE # 5236

ANALYSIS	CLAIMED	FOUND
NITROGEN	11%	11.2%
PHOSPHORUS	52%	53.0%

DAP — SAMPLED IN GREAT FALLS — SAMPLE # 4586

ANALYSIS	CLAIMED	FOUND
NITROGEN	18.0%	18.0%
PHOSPHORUS	46.0%	46.2%

MAP — SAMPLED IN CUT BANK — SAMPLE # 4588

ANALYSIS	CLAIMED	FOUND
NITROGEN	11.0%	11.1%
PHOSPHORUS	52.0%	52.6%
SULFUR	3.0%	3.1%

UREA — SAMPLED IN MOORE — SAMPLE # 4587

ANALYSIS	CLAIMED	FOUND
NITROGEN	46.0%	46.0%

MANUFACTURER

CHAS. H. LILLY CO (THE)
7737 N.E. KILLINGSWORTH
PORTLAND,OR 97218

LILLY/MILLER ULTRA GREEN LAWN FOOD 20-2-4 — SAMPLED IN BILLINGS — SAMPLE # 4268

ANALYSIS	CLAIMED	FOUND	
NITROGEN	20.0%	20.4%	
PHOSPHORUS	2.0%	3.9%	
POTASH	4.0%	4.1%	
SULFUR	15.0%	13.9%	*
IRON	2.0%	3.3%	

MANUFACTURER

CLOUDS PEAK
501 EAST 8TH ST.
SHERIDAN,WY 82801

19-9-9-9.5 .9 LAWN & GARDEN FERTILIZER — SAMPLED IN FORSYTH — SAMPLE # 4898

ANALYSIS	CLAIMED	FOUND	
NITROGEN	19.0%	19.3%	
PHOSPHORUS	9.0%	13.0%	
POTASH	9.0%	8.0%	*
SULFUR	9.0%	9.4%	
IRON	.9%	.86%	

MANUFACTURER

CO-OP SERVICE CENTER
P.O.BOX 80363
BILLINGS,MT 59108

CUSTOM BLEND — SAMPLED IN BILLINGS — SAMPLE # 4866

ANALYSIS	CLAIMED	FOUND	
NITROGEN	23.2%	24.3%	
PHOSPHORUS	9.3%	6.8%	*
POTASH	6.2%	5.7%	
SULFUR	7.7%	8.7%	

PLANT FOOD 24-8-8 — SAMPLED IN BILLINGS — SAMPLE # 4893

ANALYSIS	CLAIMED	FOUND
NITROGEN	24%	24.1%
PHOSPHORUS	8%	7.4%
POTASH	8%	8.1%
SULFUR	2.5%	5.0%

MANUFACTURER

COMINCO AMERICAN INC
P.O.BOX 3087
SPOKANE,WA 99220

46-0-0 — SAMPLED IN RICHEY — SAMPLE # 5182

ANALYSIS	CLAIMED	FOUND
NITROGEN	46.0%	46.1%

MANUFACTURER

CON AGRA
4821 XERXES AVE NORTH
MINNEAPOLIS,MN 55430

18-46-0 DAP — SAMPLED IN GLENDIVE — SAMPLE # 5184

ANALYSIS	CLAIMED	FOUND	
NITROGEN	18.0%	11.3%	*
PHOSPHORUS	46.0%	52.6%	

MANUFACTURER

CONAGRA CHEMICAL FERTILIZER CO
P.O.BOX 176
DUTTON,MT 59433

AMMONIUM NITRATE — SAMPLED IN BIG TIMBER — SAMPLE # 4895

ANALYSIS	CLAIMED	FOUND
NITROGEN	34%	34.2%

AMMONIUM SULFATE — SAMPLED IN RICHEY — SAMPLE # 5183

ANALYSIS	CLAIMED	FOUND
NITROGEN	20%	20.6%
SULFUR	24%	24.8%

MANUFACTURER

FARMERS UNION ASSOCIATION
P.O.BOX 385
HARDIN,MT 59034

CUSTOM BLEND — SAMPLED IN HARDIN — SAMPLE # 3735

ANALYSIS	CLAIMED	FOUND
NITROGEN	41.7%	42.1%
PHOSPHORUS	7%	7.0%

CUSTOM BLEND — SAMPLED IN HARDIN — SAMPLE # 5069

ANALYSIS	CLAIMED	FOUND
NITROGEN	18%	18.2%
PHOSPHORUS	46%	46.2%

MANUFACTURER

FARMERS UNION OIL CO
P.O.BOX 'P'
CIRCLE,MT 59215

18-46-0 — SAMPLED IN SIDNEY — SAMPLE # 5178

ANALYSIS	CLAIMED	FOUND
NITROGEN	18.0%	18.0%
PHOSPHORUS	46.0%	46.7%

CUSTOM BLEND — SAMPLED IN CIRCLE — SAMPLE # 5190

ANALYSIS	CLAIMED	FOUND	
NITROGEN	28%	30.0%	
PHOSPHORUS	28%	26.8%	*

DIAMMONIUM PHOSPHATE — SAMPLED IN SIDNEY — SAMPLE # 5178

ANALYSIS	CLAIMED	FOUND
NITROGEN	18%	18.0%
PHOSPHORUS	46%	46.7%

MANUFACTURER

FARMERS UNION OIL CO
HWY 2 EAST; P.O.BOX 995
WOLF POINT,MT 59201

CUSTOM BLEND — SAMPLED IN WOLF POINT — SAMPLE # 4684

ANALYSIS	CLAIMED	FOUND
NITROGEN	28%	28.8%
PHOSPHORUS	28%	28.2%

MANUFACTURER

FARMERS UNION SOIL SERVICE
P.O.BOX 2483
GREAT FALLS,MT 59403

CUSTOM BLEND — SAMPLED IN GREAT FALLS — SAMPLE # 4585

ANALYSIS	CLAIMED	FOUND
NITROGEN	7.0%	7.3%
PHOSPHORUS	1.0%	3.1%
POTASH	1.0%	1.5%

CUSTOM BLEND — SAMPLED IN GREAT FALLS — SAMPLE # 4976

ANALYSIS	CLAIMED	FOUND
NITROGEN	7.4%	7.3%
PHOSPHORUS	35.2%	34.6%
POTASH	13.2%	15.2%
SULFUR	8.9%	9.2%

SPECIALITY FERTILIZER — SAMPLED IN GREAT FALLS — SAMPLE # 4968

ANALYSIS	CLAIMED	FOUND
NITROGEN	7%	7.7%
PHOSPHORUS	1%	3.0%
POTASH	1%	1.57%

MANUFACTURER

FARMERS UNION TRADING CO
P.O.BOX 67
TERRY,MT 59349

CUSTOM BLEND — SAMPLED IN TERRY — SAMPLE # 5176

ANALYSIS	CLAIMED	FOUND
NITROGEN	6.0%	7.1%
PHOSPHORUS	30.0%	32.0%
POTASH	24.0%	24.0%

MANUFACTURER

G & G FERTILIZER
P.O.BOX 23
FLAXVILLE,MT 59222

10-34-0 — SAMPLED IN GLASGOW — SAMPLE # 4656

ANALYSIS	CLAIMED	FOUND
NITROGEN	10.0%	9.9%
PHOSPHORUS	34.0%	34.7%

MANUFACTURER

GRAIN GROWERS INC
PO BOX 1088
GLENDIVE,MT 59330

CUSTOM BLEND — SAMPLED IN GLENDIVE — SAMPLE # 5185

ANALYSIS	CLAIMED	FOUND	
NITROGEN	14.4%	8.8%	*
PHOSPHORUS	36.8%	39.8%	
POTASH	12.0%	15.0%	

MANUFACTURER

HARVEST STATES COOP
P.O.BOX 36
FALLON,MT 59326

CUSTOM BLEND — SAMPLED IN FALLON — SAMPLE # 4949

ANALYSIS	CLAIMED	FOUND	
NITROGEN	19.0%	20.1%	
PHOSPHORUS	15.0%	17.0%	
POTASH	15.0%	15.3%	

MANUFACTURER

HARVEST STATES COOPERATIVE
P.O.BOX 138
BROADVIEW,MT 59015

CUSTOM BLEND — SAMPLED IN BROADVIEW — SAMPLE # 3737

ANALYSIS	CLAIMED	FOUND	
NITROGEN	18%	18.0%	
PHOSPHORUS	46%	47.1%	

CUSTOM BLEND — SAMPLED IN BROADVIEW — SAMPLE # 5075

ANALYSIS	CLAIMED	FOUND	
NITROGEN	33.4%	34.0%	
PHOSPHORUS	11.8%	8.4%	*
POTASH	6%	8.5%	

MANUFACTURER

HARVEST STATES COOPERATIVE
P.O.BOX 355
COLUMBUS,MT 59019

CUSTOM BLEND — SAMPLED IN COLUMBUS — SAMPLE # 4872

ANALYSIS	CLAIMED	FOUND	
NITROGEN	30.0%	30.2%	
PHOSPHORUS	10.0%	12.4%	

MANUFACTURER

HI LINE FERTILIZER INC
P.O.BOX 228
HINGHAM,MT 59528

10-34-0 — SAMPLED IN CONRAD — SAMPLE # 4591

ANALYSIS	CLAIMED	FOUND	
NITROGEN	10.0%	10.7%	
PHOSPHORUS	34.0%	31.1%	*

MANUFACTURER

HOLLAND BULB PRODUCTS
P.O.BOX 540
SYLACAUGA,AL 35150

HOLLAND BULB BOOSTER FERTILIZER 1301354180 SAMPLED IN MONTANA SAMPLE # 4676

ANALYSIS	CLAIMED	FOUND
NITROGEN	9%	9.6%
PHOSPHORUS	9%	9.3%
POTASH	6%	5.8%

MANUFACTURER

J.R.SIMPLOT CO
P.O.BOX 912
POCATELLO,ID 83204

11-52-0 SAMPLED IN WOLF POINT SAMPLE # 4637

ANALYSIS	CLAIMED	FOUND
NITROGEN	11.0%	11.1%
PHOSPHORUS	52.0%	51.9%

18-46-0 SAMPLED IN WOLF POINT SAMPLE # 4636

ANALYSIS	CLAIMED	FOUND
NITROGEN	18.0%	18.0%
PHOSPHORUS	46.0%	46.0%

AMMONIUM PHOSPHATE SAMPLED IN CHOTEAU SAMPLE # 4960

ANALYSIS	CLAIMED	FOUND
NITROGEN	16.0%	16.4%
PHOSPHORUS	20.0%	19.9%

AMMONIUM PHOSPHATE W/SULFUR 16-20-0-14 SAMPLED IN RYEGATE SAMPLE # 3738

ANALYSIS	CLAIMED	FOUND
NITROGEN	16%	16.3%
PHOSPHORUS	20%	21.6%
SULFUR	14%	14.6%

DIAMMONIUM PHOSPHATE SAMPLED IN LEWISTOWN SAMPLE # 4957

ANALYSIS	CLAIMED	FOUND
NITROGEN	18.0%	18.5%
PHOSPHORUS	46.0%	46.9%

DIAMMONIUM PHOSPHATE SAMPLED IN CHOTEAU SAMPLE # 4961

ANALYSIS	CLAIMED	FOUND
NITROGEN	18%	18.0%
PHOSPHORUS	46%	47.4%

DIAMMONIUM PHOSPHATE — SAMPLED IN SIDNEY — SAMPLE # 5186

ANALYSIS	CLAIMED	FOUND
NITROGEN	18%	18.2%
PHOSPHORUS	46%	46.6%

DIAMMONUIM PHOSPHATE — SAMPLED IN CHOTEAU — SAMPLE # 4961

ANALYSIS	CLAIMED	FOUND
NITROGEN	18.0%	18.0%
PHOSPHORUS	46.0%	47.4%

GARDEN LAWN FERTILIZER — SAMPLED IN HYSHAM — SAMPLE # 4899

ANALYSIS	CLAIMED	FOUND
PHOSPHORUS	10.0%	11.3%
POTASH	5.0%	5.9%
SULFUR	3.4%	1.8%
IRON	3.4%	1.8%
NITROGEN	16.0%	17.2%

MONOAMMONIUM PHOSPHATE — SAMPLED IN BIG TIMBER — SAMPLE # 4896

ANALYSIS	CLAIMED	FOUND
NITROGEN	11%	11.9%
PHOSPHORUS	52%	52.2%

MONOAMMONIUM PHOSPHATE — SAMPLED IN CHOTEAU — SAMPLE # 4962

ANALYSIS	CLAIMED	FOUND
NITROGEN	11.0%	11.2%
PHOSPHORUS	52.0%	52.1%

MANUFACTURER

J.R.SIMPLOT SOIL SERVICE
P.O.BOX 80125
BILLINGS,MT 59108

CUSTOM BLEND — SAMPLED IN BILLINGS — SAMPLE # 4855

ANALYSIS	CLAIMED	FOUND	
NITROGEN	24.6%	23.0%	*
PHOSPHORUS	12.1%	15.9%	
POTASH	9.1%	10.3%	

CUSTOM BLEND — SAMPLED IN BILLINGS — SAMPLE # 4863

ANALYSIS	CLAIMED	FOUND
NITROGEN	30.0%	30.6%
PHOSPHORUS	10.0%	10.2%

J.R.SIMPLOT SOIL SERVICE - BILLINGS CONTINUED

CUSTOM BLEND — SAMPLED IN BILLINGS — SAMPLE # 4870

ANALYSIS	CLAIMED	FOUND	
NITROGEN	11.5%	12.3%	
PHOSPHORUS	13.6%	13.0%	
POTASH	19.7%	18.6%	

CUSTOM BLEND — SAMPLED IN BILLINGS — SAMPLE # 4851

ANALYSIS	CLAIMED	FOUND	
NITROGEN	19.0%	19.1%	
PHOSPHORUS	12.7%	13.8%	
POTASH	6.3%	7.8%	
SULFUR	10.2%	9.3%	*

CUSTOM BLEND — SAMPLED IN BILLINGS — SAMPLE # 4864

ANALYSIS	CLAIMED	FOUND
NITROGEN	8.3%	9.7%
PHOSPHORUS	39.1%	42.1%
POTASH	15.4%	11.0%

CUSTOM BLEND — SAMPLED IN BILLINGS — SAMPLE # 4869

ANALYSIS	CLAIMED	FOUND
NITROGEN	30.5%	30.6%
PHOSPHORUS	10.1%	10.0%

CUSTOM BLEND — SAMPLED IN BILLINGS — SAMPLE # 4870

ANALYSIS	CLAIMED	FOUND
SULFUR	9.8%	11.4%

CUSTOM BLEND — SAMPLED IN BILLINGS — SAMPLE # 4863

ANALYSIS	CLAIMED	FOUND
NITROGEN	30%	30.6%
PHOSPHORUS	10%	10.2%

CUSTOM BLEND — SAMPLED IN BILLINGS — SAMPLE # 4870

ANALYSIS	CLAIMED	FOUND
NITROGEN	11.5%	12.3%
PHOSPHORUS	13.6%	13.0%
POTASH	19.7%	18.6%
SULFUR	9.8%	11.4%

CUSTOM BLEND — SAMPLED IN BILLINGS — SAMPLE # 4864

ANALYSIS	CLAIMED	FOUND	
NITROGEN	8.3%	9.7%	
PHOSPHORUS	39.1%	42.1%	
POTASH	15.4%	11.0%	*

CUSTOM BLEND — SAMPLED IN BILLINGS — SAMPLE # 4869

ANALYSIS	CLAIMED	FOUND	
NITROGEN	30.5%	30.6%	
PHOSPHORUS	10.1%	10.0%	

MANUFACTURER

K & W FEED and GRAIN
P.O.BOX 1389
BIG TIMBER,MT 59011

CUSTOM BLEND — SAMPLED IN BIG TIMBER — SAMPLE # 4883

ANALYSIS	CLAIMED	FOUND	
NITROGEN	30.0%	11.2%	*
PHOSPHORUS	10.0%	24.2%	*

MANUFACTURER

KALIUM CHEM CORP- DIV P.P.G.
2550 GOLF RD.; 60 GOULD CTR
ROLLING MEADOWS,IL 60008

POTASH — SAMPLED IN CIRCLE — SAMPLE # 5181

ANALYSIS	CLAIMED	FOUND
POTASH	62.0%	61.3%

POTASH — SAMPLED IN THREE FORKS — SAMPLE # 5233

ANALYSIS	CLAIMED	FOUND
POTASH	62%	63.3%

MANUFACTURER

KERLEY CHEMICAL
P.O.BOX 11589
PHOENIX,AZ 85061

AMMONIUM SULFATE — SAMPLED IN CONRAD — SAMPLE # 4592

ANALYSIS	CLAIMED	FOUND	
NITROGEN	12.0%	13.9%	
SULFUR	26.0%	22.8%	*

AMMONIUM THIOSULFATE — SAMPLED IN GREAT FALLS — SAMPLE # 4963

ANALYSIS	CLAIMED	FOUND
NITROGEN	12.0%	12.8%
SULFUR	26.0%	26.0%

AMMONIUM THIOSULFATE — SAMPLED IN BELGRADE — SAMPLE # 5239

ANALYSIS	CLAIMED	FOUND
NITROGEN	12%	11.9%
SULFUR	26%	26.0%

MANUFACTURER

LAUREL COOPERATIVE ASSN
P.O.BOX 7
EDGAR,MT 59026

CUSTOM BLEND — SAMPLED IN EDGAR — SAMPLE # 4887

ANALYSIS	CLAIMED	FOUND	
NITROGEN	24.0%	24.0%	
PHOSPHORUS	8.5%	8.8%	
POTASH	11.3%	10.4%	*
SULFUR	2.0%	2.6%	

CUSTOM BLEND — SAMPLED IN EDGAR — SAMPLE # 4888

ANALYSIS	CLAIMED	FOUND	
NITROGEN	32.4%	31.0%	*
PHOSPHORUS	9.2%	8.7%	
SULFUR	4.6%	6.7%	
ZINC	2.4%	3.2%	

CUSTOM BLEND — SAMPLED IN EDGAR — SAMPLE # 4868

ANALYSIS	CLAIMED	FOUND
NITROGEN	21.8%	22.0%
PHOSPHORUS	15.5%	15.5%
POTASH	12.5%	13.7%

MANUFACTURER

MINTANA MILLS INC
2019 MINNESOTA AVE
BILLINGS,MT 59101

LAWN & GARDEN FERTILIZER — SAMPLED IN BILLINGS — SAMPLE # 4871

ANALYSIS	CLAIMED	FOUND
NITROGEN	24%	25.5%
PHOSPHORUS	6%	6.2%
POTASH	6%	7.6%

MANUFACTURER

MON-KOTA INC
P.O.BOX 487
FAIRVIEW,MT 59221

0-0-14 — SAMPLED IN FAIRVIEW — SAMPLE # 5179

ANALYSIS	CLAIMED	FOUND
POTASH	14.0%	14.2%

MANUFACTURER

MONTANA SULFUR & CHEMICAL CO
P.O.BOX 31118
BILLINGS,MT 59107

DISINTEGRATING SULPHUR GRANULES — SAMPLED IN BILLINGS — SAMPLE # 4856

ANALYSIS	CLAIMED	FOUND
SULFUR	90.0%	90.1%

HIGH PURITY FLAKED SULPHUR — SAMPLED IN BILLINGS — SAMPLE # 4859

ANALYSIS	CLAIMED	FOUND
SULFUR	99.9%	100.0%

HIGH PURITY GROUND SULPHUR — SAMPLED IN BILLINGS — SAMPLE # 4857

ANALYSIS	CLAIMED	FOUND
SULFUR	99.5%	100.0%

MANUFACTURER

NITRO GREEN
P.O.BOX 5314
HELENA,MT 59604

ROUND 2 — SAMPLED IN HELENA — SAMPLE # 5251

ANALYSIS	CLAIMED	FOUND
NITROGEN	3.0%	3.2%
PHOSPHORUS	0.3%	0.4%
POTASH	0.6%	0.85%

MANUFACTURER

NU-WEST IND. INC
3010 CONDA ROAD
SODA SPRINGS,ID 83276

AMMONIUM PHOSPHATE W/SULFUR 16-20-0-15 — SAMPLED IN THREE FORKS — SAMPLE # 5232

ANALYSIS	CLAIMED	FOUND
NITROGEN	16%	16.6%
PHOSPHORUS	20%	20.5%
SULFUR	15%	15.6%

AMMONIUM PHOSPHATE-SULFATE — SAMPLED IN BIG TIMBER — SAMPLE # 4897

ANALYSIS	CLAIMED	FOUND
NITROGEN	16%	16.8%
PHOSPHORUS	20%	21.1%
SULFUR	14%	14.2%

MONOAMMONIUM PHOSPHATE — SAMPLED IN LEWISTOWN — SAMPLE # 4958

ANALYSIS	CLAIMED	FOUND
NITROGEN	11.0%	11.2%
PHOSPHORUS	52.0%	52.9%

MONOAMMONIUM PHOSPHATE — SAMPLED IN HARLOWTON — SAMPLE # 5231

ANALYSIS	CLAIMED	FOUND
NITROGEN	11%	10.9%
PHOSPHORUS	52%	52.7%

MANUFACTURER

O.M.SCOTT & SONS CO
14310 SCOTTSLAWN
MARYSVILLE,OH 43041

SCOTTS TURF BUILDER 29-3-4 LOT #112091305 — SAMPLED IN BILLINGS — SAMPLE # 4270

ANALYSIS	CLAIMED	FOUND
NITROGEN	29.0%	29.8%
PHOSPHORUS	3.0%	3.1%
POTASH	4.0%	3.7%

MANUFACTURER

RINGER CORPORATION
9959 VALLEY VIEW ROAD
MINNEAPOLIS,MN 55344

LAWN RESTORE LOT #3601 — SAMPLED IN BILLINGS — SAMPLE # 4269

ANALYSIS	CLAIMED	FOUND
NITROGEN	9.0%	9.2%
PHOSPHORUS	4.0%	4.0%
POTASH	4.0%	4.9%

MANUFACTURER

SCHULTZ COMPANY
P.O.BOX 173
MARYLAND HTS,MO 63043

SHULTZ-INSTANT SOLUBLE PLANT FOOD — SAMPLED IN MONTANA — SAMPLE # 4677

ANALYSIS	CLAIMED	FOUND
NITROGEN	20%	20.0%
PHOSPHORUS	30%	30.0%
POTASH	20%	20.7%

MANUFACTURER

SELSTAD SOIL SERVICE
R.R. 5045
GREAT FALLS,MT 59401

LAWN RANGER — SAMPLED IN GREAT FALLS — SAMPLE # 4593

ANALYSIS	CLAIMED	FOUND
NITROGEN	.043%	5.4%
PHOSPHORUS	.008%	1.3%
POTASH	.006%	1.2%

MANUFACTURER

SHERRITT FERTILIZER INC
7600 N.E.41st STREET;SUITE 195
VANCOUVER,WA 98662

28-0-0 — SAMPLED IN GREAT FALLS — SAMPLE # 4959

ANALYSIS	CLAIMED	FOUND
NITROGEN	28.0%	28.5%

46-0-0 — SAMPLED IN WOLF POINT — SAMPLE # 4638

ANALYSIS	CLAIMED	FOUND
NITROGEN	46.0%	46.3%

NITROGEN SOLUTION — SAMPLED IN CONRAD — SAMPLE # 4590

ANALYSIS	CLAIMED	FOUND	
NITROGEN	28.0%	27.0%	*

NITROGEN SOLUTION 28-0-0 — SAMPLED IN GREAT FALLS — SAMPLE # 4959

ANALYSIS	CLAIMED	FOUND
NITROGEN	28%	28.5%

MANUFACTURER

SUPER GRO OF IOWA
P.O.BOX 126
APLINGTON,IA 50604

ECOLOGICAL FERTILIZER FOR LAWN & GARDENS — SAMPLED IN FORSYTH — SAMPLE # 4900

ANALYSIS	CLAIMED	FOUND
NITROGEN	4.0%	4.2%
PHOSPHORUS	2.0%	4.1%
POTASH	0%	10.8%
SULFUR	10.0%	10.2%

MANUFACTURER

VIDA AG SUPPLY
P.O.BOX 63
VIDA,MT 59274

CUSTOM BLEND — SAMPLED IN VIDA — SAMPLE # 5191

ANALYSIS	CLAIMED	FOUND
NITROGEN	23%	22.2%
PHOSPHORUS	34%	35.6%

MANUFACTURER

VIGORO INDUSTRIES, INC
P.O.BOX 206
MONROE,WA 98272

DEEP GREEN LAWN FD 23-3-6 LOT #032789 — SAMPLED IN BILLINGS — SAMPLE # 4861

ANALYSIS	CLAIMED	FOUND	
NITROGEN	23.0%	22.1%	*
PHOSPHORUS	3.0%	4.1%	
POTASH	6.0%	6.8%	
IRON	1.0%	1.2%	

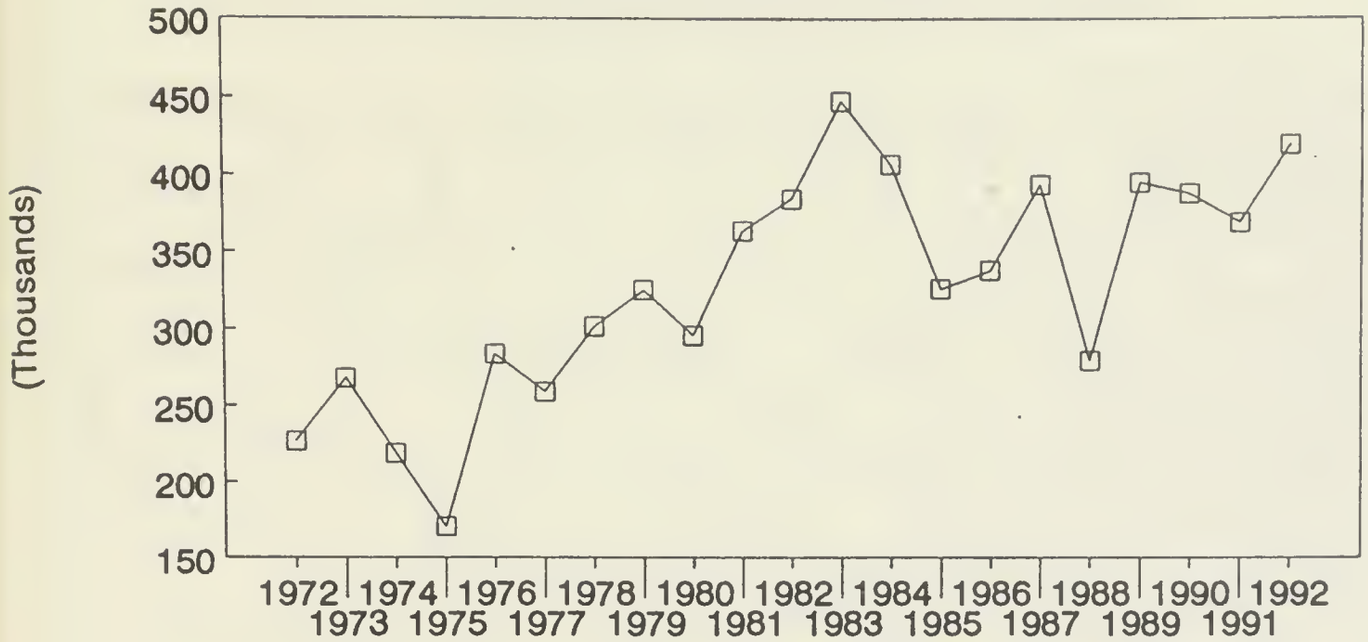
Fertilizer Sampling & Analysis History

Year	# Samples Taken	# Samples Deficient	% Samples Deficient
1977	448	32	7.1
1978	533	30	5.6
1979	365	21	5.8
1980	506	27	5.3
1981	428	24	5.6
1982	607	41	6.8
1983	558	50	9
1984	379	58	15.3
1985	368	55	14.9
1986	228	43	18.9
1987	175	25	14.3
1988	228	18	7.9
1989	128	17	13.3
1990	154	31	20.1
1991	142	18	12.7
1992	107	21	19.6

1992 Fertilizer Sampling & Analysis Breakdown

Nutrient	# Analyzed	# Deficient	% Deficient
Nitrogen	99	9	9.1
Phosphate	83	6	7.2
Potash	40	3	7.5
Sulfur	30	4	13.3
Iron	5		0
Zinc	1		0
Total	258	22	8.5

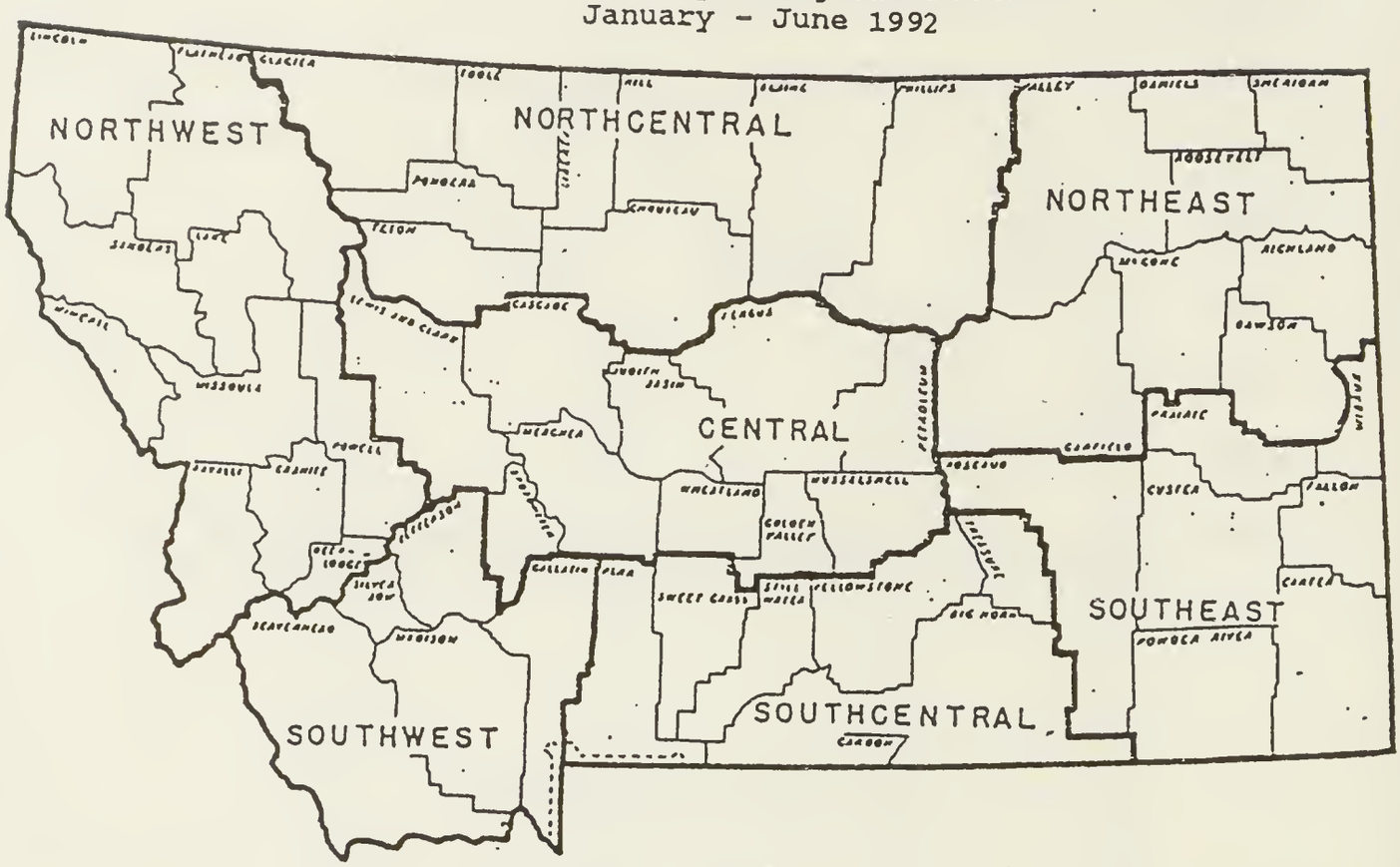
Fertilizer Tonnage History



Fertilizer Tonnage History

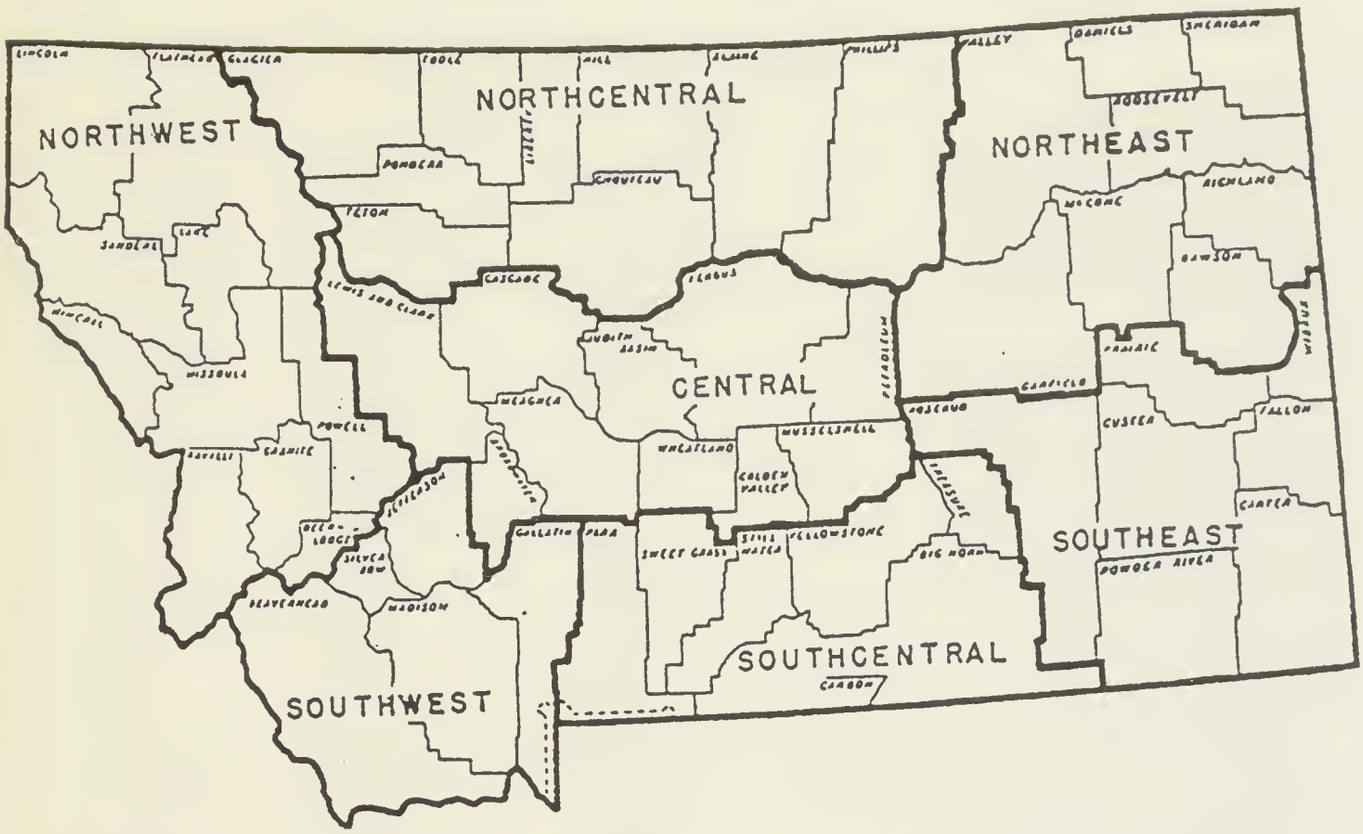
Year	Tonnage
1972	226,939
1973	268,061
1974	219,197
1975	170,324
1976	283,925
1977	259,211
1978	301,487
1979	324,838
1980	295,958
1981	363,295
1982	384,387
1983	447,407
1984	406,567
1985	325,887
1986	337,626
1987	393,505
1988	279,616
1989	395,033
1990	387,583
1991	368,868
1992	418,982

FERTILIZER AND FERTILIZER MATERIAL SOLD IN MONTANA
By Crop Reporting Districts
January - June 1992



STATEWIDE TOTAL	SOUTH WEST	NORTH WEST	SOUTH CENTRAL	CENTRAL	NORTH CENTRAL	SOUTH EAST	NORTH EAST	TOTAL
Anhydrous Ammonia	902	1311	774	3372	9915	916	434	17624
Ammonium Nitrate	11966	3434	14713	6154	8033	272	258	44830
Ammonium Sulfate	1804	1489	745	558	2381	64	711	7752
Urea	1314	1569	7798	17252	22919	3268	7896	62016
Ammonium Thiosulfate	-	-	-	13	369	-	-	382
Nitrogen Sols. 32%	162	-	611	521	237	161	171	1863
Nitrogen Sols. 28%	-	522	806	1312	2956	105	1456	7157
Phosphorus Materials	229	197	199	95	147	-	-	867
Phosphoric Acid	-	-	-	55	1820	90	-	1965
Potash Material	2945	1910	3020	2310	6168	483	2081	18917
Sulfur	43	71	418	20	161	3	8	724
Sulfuric Acid	-	-	-	46	13	-	-	59
DAP	3635	760	6114	2132	3969	1676	8787	27074
MAP	5331	1835	5025	6970	22411	1568	4425	47565
APS	1248	2394	923	749	1132	-	12	6458
10-34-0	71	-	32	53	2032	-	160	2348
2-1-0 Ratio	3	8	15	1158	1117	-	48	2349
1-1-0 Ratio	-	-	14	600	360	-	116	1090
1-1-1 Ratio	7	13	3	704	454	-	-	1181
Other Blends	17	715	73	977	1536	49	-	3367
Micronutrients	28	60	98	9	48	27	28	298
Gypsum/Lime	-	208	28	-	2	31	6	275
Compost	-	1200	-	-	-	-	-	1200
TOTALS	29704	17695	41408	45061	88179	8714	26600	257361

FERTILIZER AND FERTILIZER MATERIAL SOLD IN MONTANA
BY CROP REPORTING DISTRICT
JULY - DECEMBER 1992



STATEWIDE TOTAL	SOUTH WEST	NORTH WEST	SOUTH CENTRAL	CENTRAL	NORTH CENTRAL	SOUTH EAST	NORTH EAST	TOTAL
Anhydrous Ammonia	325	40	2071	7053	20751	701	326	31266
Ammonium Nitrate	2134	369	4224	1190	1094	318	627	9956
Ammonium Sulfate	747	486	484	130	463	66	260	2636
Urea	1370	459	5503	4442	11017	1604	4165	28560
Ammonium Thiosulfate	17	-	-	-	594	-	22	633
Nitrogen Sols. 32%	25	-	319	771	42	6	16	1179
Nitrogen Sols. 28%	-	74	-	73	3133	-	759	4039
Nitrogen Sols., other	-	-	585	4077	-	-	-	4662
Phosphorus Materials	25	26	55	189	309	-	-	604
Phosphoric Acid	-	-	50	-	959	-	-	1009
Potash Material	1076	280	750	1333	1961	537	1377	7315
Sulfur	15	18	61	2	10	1	10	116
Sulfuric Acid	-	-	-	-	-	-	-	-
DAP	1054	47	6139	2372	2122	1465	3295	16493
MAP	2903	426	2044	8225	20770	1382	3045	38795
APS	2252	505	704	940	797	-	106	5305
10-34-0	18	-	8	185	2520	31	255	3017
2-1-0 Ratio	6	1	1	904	924	-	17	1847
1-1-0 Ratio	1	-	-	1100	402	-	297	1800
1-1-1 Ratio	2	7	-	900	300	-	-	1209
Other Blends	-	-	-	75	785	-	41	907
Micronutrients	11	30	40	75	-	12	10	178
Gypsum/Lime	-	34	31	-	-	30	1	95
Compost	-	-	-	-	-	-	-	-
TOTALS	11981	2800	23069	34035	68953	6153	14627	161621

MONTANA DEPARTMENT OF AGRICULTURE
FERTILIZER AND FERTILIZER MATERIAL SOLD IN MONTANA
FOR THE YEAR 1992

Statewide Total	JAN.–JUN. 1992	JULY–DEC. 1992	YEARLY TOTALS
Anhydrous Ammonia	17,624	31,266	48,890
Ammonium Nitrate	44,830	9,956	54,786
Ammonium Sulfate	7,752	2,636	10,388
Urea	62,016	28,560	90,576
Ammonium Thiosulfate	382	633	1,015
Nitrogen Sols. 32%	1,863	1,179	3,042
Nitrogen Sols. 28%	7,157	4,039	11,196
Nitrogen Sols., other		4,662	4,662
Phosphorus Material	867	604	1,471
Phosphoric Acid	1,965	1,009	2,974
Potash Material	18,917	7,315	26,232
Sulfur	724	116	840
Sulfuric Acid	59		59
DAP	27,074	16,493	43,567
MAP	47,565	38,795	86,360
APS	6,458	5,305	11,763
10–34–0	2,348	3,017	5,365
2–1–0 RATIO	2,349	1,847	4,196
1–1–0 RATIO	1,090	1,800	2,890
1–1–1 RATIO	1,181	1,209	2,390
OTHER BLENDS	3,367	907	4,274
MICRONUTRIENTS	298	178	476
GYPSUM/LIME	275	95	370
COMPOST	1,200		1,200
TOTALS	257,361	161,621	418,982

TOTAL NITROGEN	75,587	54,571	130,158
TOTAL P205	42,441	31,670	74,111
TOTAL K2O	11,350	4,389	15,739

MONTANA DEPARTMENT OF AGRICULTURE
PLANT INDUSTRY DIVISION
PO BOX 200201
HELENA, MT 59620-0201

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350 copies of this public document were published at an estimated cost of $1.26 per copy, for a total cost of $441.00, which includes $303.00 for printing and $138.00 for distribution.